

AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended): A method for fabricating a ferroelectric random access memory device, comprising the steps of:

- forming a first inter-layer insulation layer on a substrate;
- forming a storage node contact connected with a partial portion of the substrate by passing through the first inter-layer insulation layer;
- forming a lower electrode connected to the storage node contact on the first inter-layer insulation layer;
- forming a second inter-layer insulation layer having a surface level lower than that of the lower electrode so that the second inter-layer insulation layer encompasses a bottom part of the lower electrode;
- forming an impurity diffusion barrier layer encompassing side walls of an upper part of the lower electrode on the second inter-layer insulation layer;
- forming a ferroelectric layer on the lower electrode and the impurity diffusion barrier layer; and
- forming a top electrode on the ferroelectric layer.

Claim 2 (Original): The method as recited in claim 1, wherein the step of forming the second inter-layer insulation layer includes the steps of:

- depositing a first insulation layer on the first inter-layer insulation layer and the lower electrode; and
- performing a blanket etch-back process to the first insulation layer until a surface of the lower electrode is exposed to thereby form the second inter-layer insulation layer.

Claim 3 (Original): The method as recited in claim 2, wherein the first insulation layer is made of a material such as boron-phosphorus-silicate glass (BPSG), phosphorus-silicate glass (PSG) and boron-silicate glass (BSG).

Claim 4 (Original): The method as recited in claim 1, wherein the step of forming the impurity diffusion barrier layer includes the steps of:

depositing a second insulation layer on an entire surface of a structure including the second inter-layer insulation layer; and

performing an blanket etch-back process to the second insulation layer until a surface of the lower electrode is exposed.

Claim 5 (Original): The method as recited in claim 4, wherein the second insulation layer is formed with one of a material such as silicon oxide containing no impurity, silicon nitride and a complex material of these two silicon oxide and silicon nitride.

Claim 6 (Original): The method as recited in claim 5, wherein the silicon oxide containing no impurity is one of tetra-ethyl-ortho silicate (TEOS) and undoped silicate glass (USG).

Claim 7 (Original): The method as recited in claim 4, wherein the second insulation layer is deposited to a thickness ranging from about 1 nm to about 100 nm.